# Reclamation

## What We Do

Recycling beneficial resources is an important goal at our regional treatment plants. The wastewater treatment process breaks down the organic matter, producing methane gas and a semisolid organic product called biosolids.

Used properly, biosolids improve plant growth and condition the soil. Since 1973, the WTD has operated a wide-ranging recycling program that uses biosolids in agriculture, composting and forestry.

The utility also treats some wastewater to a higher level and uses that reclaimed water to meet the water resource needs of the region's residents and environment. The division began investigating reuse in 1990. It uses reclaimed water in place of non-drinking water within its treatment plants.

The WTD works with local jurisdictions to reclaim wastewater for non-drinking water uses such as irrigating golf courses.

# What We've Done

## Recycling Biosolids

King County continued its successful, cost-effective and award-winning program of recycling biosolids in agriculture, forests and compost. The program established a secure long-term market with contracts for biosolids application.

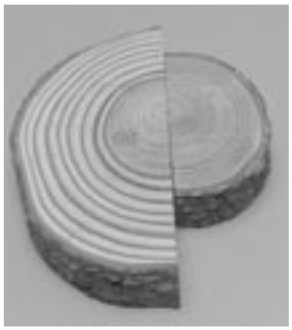
In 2001, 119,000 wet tons of biosolids were transported to Eastern Washington farms and applied to agricultural crops as a soil amendment.

King County also continued to monitor water quality of streams near biosolids applications sites in forests. In 2000, the National Marine Fisheries Service concluded that the biosolids forestry program poses no risk to chinook salmon and, in fact, provides an environmental benefit.

A new fleet of quieter, cleaner trucks is hauling biosolids to recycling sites in forests and farmland.

### Reducing Biosolids Hauling

At the West Point Treatment Plant in Seattle, King County has lowered hauling costs by replacing conventional centrifuges for dewatering biosolids



These tree trunk sections show growth with and without biosolids as a soil enhancer in forestland.

with "high-solids" centrifuges. The new equipment creates a drier, denser material, and it reduces the volume of biosolids hauled from the plant to application sites.

Since buying a fleet of specially designed trucks in 2000, the Wastewater Treatment Division is saving an estimated $3.7 million in biosolids-hauling costs over 10 years.

In addition, the trucks are quieter, cleaner and more efficient with a larger capacity to haul biosolids from the treatment plants through neighborhoods to biosolids recycling sites. The trucks also enable the county to reduce the number of biosolids hauling trips through Discovery Park and the Magnolia community to an average of less than five trucks a day.

### Renewing Forests with Biosolids

King County's Biosolids Forestry Program in 2001 renewed for five years its support for the region's Mountains to Sound Greenway Trust. That public/private partnership is working to protect and enhance green landscapes along Interstate 90 connecting Puget Sound with the Cascade Mountains.

The Weyerhaeuser Co. and the state Department of Natural Resources provide biosolids sites within the Greenway, resulting in one of the county's lowest biosolids haul and application costs. Money saved is used for environmental restoration through a logging-road elimination program.

## Exploring and Increasing Water Reuse

Reclaimed water is wastewater that gets treated to such a high level it can be used for non-drinking water purposes such as irrigating golf courses and farm crops, heating and cooling, and industrial processing. Reclaimed water

is available year-round, even during dry summer months or when drought conditions can strain other water resources.

The WTD undertook projects in 2001 to increase reclaimed water production to about 2 million gallons per day. Those efforts included increasing water reuse at its treatment plants and providing reused water for Fort Dent Park and street washing elsewhere in King County.

**Testing Water Reuse Technologies**
At the West Point Treatment Plant, the WTD tested seven emerging technologies for reclaiming wastewater throughout the system.

In March 2002, the division completed the demonstration, earning the 2002 National Environmental Achievement Award for Research and Technology from the Association of Metropolitan Sewerage Agencies.

Results of the study will be used to select the technology for reclaiming wastewater at the Brightwater Treatment Plant, a reclaimed water production facility, and other facilities.

## What's Ahead

**Reclaiming Water for the Sammamish Valley**
King County is in the process of siting and designing a reclaimed water production facility in the Sammamish Valley. This facility will produce about 1.5 million gallons per day of reclaimed water for irrigation. By using reclaimed water, an equivalent amount of water will remain in the Sammamish River and groundwater.

The reclaimed water production facility will begin operating in mid-2004.